

Case Study Research

DEFINING THE CASE STUDY — Yin, Ch. 1

Goals for today are to understand:

1. What is a case study
2. When is it useful
3. Guidelines for designing a case study
4. Identifying key methodological challenges

What is a case study?

An empirical inquiry that:

- investigates a contemporary phenomenon in depth and within its real world context, especially when
- phenomenon may be context-dependent

Can be single (drawing conclusions from one context) or multiple (drawing generalizable conclusions from patterns across contexts).

Case study addresses specific methodological challenges:

- copes with distinct situation in which there will be many more variables of interest than data points and thus
- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as a result,
- benefits from the prior development of theoretical propositions to guide data collection and analysis

Case study can accommodate a variety of epistemological orientations, but these will influence research design

- positivist: there is a single reality, independent of any observer
- hermeneutic: multiple realities exist having multiple meanings (how does this approach impact data collection?)

Case study vs other forms of research:

Experiments are context free; surveys aren't structured to investigate context; histories deal with context but in the past

The idea of research hierarchy (case studies are only to explore, surveys and histories are to describe and experiments are for explanatory or causal inquiries) in which case studies are

only a preliminary method and cannot be used to describe or test propositions, isn't helpful.

There can be significant overlaps between methods and mixed methods often are useful in understanding complex phenomena. It is often advisable to consider all methods in an 'inclusive and pluralistic fashion' before settling on the choice of methods for a research study.

When is a case study useful:

- Main research questions are "how" or "why" questions
- Researcher has little or no control over behavioral events (in contrast to a formal experiment)
- Focus of study is contemporary, not historical
- Study requires extensive and in-depth description of a social phenomenon

Case study typology:

Exploratory: structured test of initial assumptions (a rationale and degree of direction)

Descriptive: What or how many; who or where? (survey or archival study may be best)

Explanatory: How or why?

Special case: Evaluation

Note: Randomized control trials (RCT) (thought by some to be the best social science) can help determine whether an intervention was effective. But RCTs cannot help understand how or why something is effective)

Case study in evaluation. Can be helpful to:

- **explain** presumed causal links in real world interventions that are too complex for survey or experimental methods
- **describe** an intervention and its real world context
- **illustrate** certain topics within an evaluation
- **elucidate** an intervention with no clear, single set of outcomes

Program sponsors, rather than researchers alone, may have a hand in defining questions and relevant data categories.

Key challenges of case study method:

- How to define the case (bounding)
- How to determine relevant data to be collected (bounding)
- What to do with the data once collected (analysis)

Overall concern: rigorous and fair collection and presentation of empirical data

Process:

- **start and design study**
 - What is my case study about (substance)?
 - What is the form of my question (who, what, where, why, or how)?
 - Literature review to develop sharp, insightful questions about the topic
- **collect evidence**
- **analyze data**
- **develop theory**
- **compose a case study report**

DESIGNING THE CASE STUDY — Yin Ch. 2

What is a research design?

- A "**logical model of proof**" that guides the investigator in the process of collecting, analyzing and interpreting observations — allows researchers to draw inferences concerning causal relationships among variables under investigation.
 - What to study
 - what data are relevant
 - what data to collect
 - how to analyze the results

Five elements of a research design:

Identify data to be collected— define:

1. question: case studies most useful for answering how, why
2. propositions, if any to help problematize your question (e.g., organizations collaborate because they derive mutual benefit).
3. units of analysis (a neighborhood or a small group; a new technology or an innovation process?)
 - Bounding the case: helps establish that a real-life phenomenon with a concrete manifestation is being studied and helps distinguish phenomenon from context
 - Units of analysis should be comparable to those of similar past research or should innovate in clear and operationally defined ways

Anticipate analysis of data — determine:

4. the logic linking the data to the propositions: e.g., pattern matching, explanation building, time-series analysis, logic models, cross-case synthesis

5. criteria for interpreting the findings: anticipate and enumerate important rival theories

The Role of Theory

- Theory is a “hypothetical story about why acts, events, structure, and thoughts occur”
- The complete research design embodies a “theory” of what is being studied. Initial theory development needed before beginning data collection (different from ethnography) Yin p. 38
- Using theory to generalize lessons learned: p. 41
 - **statistical generalization:** making an inference about a general population on the basis of empirical data from a sample of the population (survey research) (beware: cases aren’t sampling units)
 - **analytical generalization:** go beyond the specific context to:
 - corroborate, modify, reject or otherwise advance theoretical concepts referenced in the study; or
 - elaborate new concepts arising from study findings

Criteria for Judging the Quality of Research Designs

Yin pp. 45-6

Four tests common to all social science research methods:

Construct validity:

- define phenomenon studied in terms of specific concepts related to original aims of study (neighborhood change measured in terms of changes in crime)
- identify operational measures that match the concepts, hopefully used in other contexts (study police reports— method used by FBI)

Internal validity:

- establish a causal relationship whereby event X led to event Y — eliminate all rival explanations and spurious relationships

External validity (generalizability)

- establish that findings are generalizable beyond the specific context

Reliability/Replicability

- demonstrate that study (same procedures) can be repeated with the same results

Single case typologies p. 51

- **critical:** test whether the study's propositions are true under the circumstances specified (circumstances so clearly align with propositions, if they are true in this case, they are true).
- **extreme/unusual:** glean insights about normal circumstances (e.g. studying the conditions for successful wealth creation in the poorest urban county)
- **common:** capture insights about every day circumstances
- **revelatory:** observe a phenomenon previously inaccessible to researchers
- **longitudinal:** examining how processes and their underlying dynamics change over time.

Embedded and holistic case studies — unit of analysis is

key Multiple case typologies:

- can be seen as more robust than individual case studies
- must follow a “replication” design

Miscellaneous:

- **closed or adaptive design:** ok to change research design if initial suppositions don't line up and careful consideration given to impact of changes on research overall suggests that a change is appropriate. Adaptiveness should not diminish rigor of approach
- **mixed methods research:** forces methods to share same research design. Allows collection of complementary data and conduct of counterpart analyses. Enables analysis of more complex research questions

SKILLS OF THE RESEARCHER— Yin Ch. 3

Skills of the Researcher:

- data collection is not standardized
- continuous interaction between theory being advanced and data being collected

Training for a case study

- Ask good questions
- Be a good “listener”
- Stay adaptive
- Have a firm grasp of the issues being studied
- Avoid biases
- Conduct research ethically

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